ASTER LAEVIS (ASTERACEAE) NEW FOR TEXAS —A SIGNIFICANT RANGE EXTENSION AND A NEW VARIETY

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The occurrence of *Aster leavis* L. in Texas has not been previously reported. Two years ago, four collections were discovered in the herbarium of Sul Ross State University (SRSC), one originally labelled *A. Wootonii* Greene (*B. N. Warnock 10995*), the others among the unidentified asters (*Warnock 12070, 23371,* and *Turner & Warnock 157*). Two sheets, originally marked as "closest to" and later annotated by M. C. Johnston as *A. hesperius* A. Gray, are on deposit in the Lundell collection at the University of Texas Herbarium (LL): *Correll & I. M. Johnston 19156* and *Correll & Correll 26040.* All these plants were collected in the Guadalupe Mountains, Culberson County, Texas, on limestone soil, at elevations between 1,800 and 2,700 meters. They came from stations in and near the McKittrick Canyon.

Aster laevis is a variable species with wide distribution, ranging from Maine westward to British Columbia and southward to Georgia. Previous records from the southwestern United States place the species as far south as Lincoln County, New Mexico. Other collections from that state are from Colfax, Mora, San Miguel, Santa Fe, Taos, and Union counties. Wooton & Standley (1915) list the vegetational zone in which *A. laevis* occurs as "Upper Sonoran and Transition". The occurrence of populations in the Trans-Pecos region of Texas is, therefore, not really surprising, because the topography and vegetation of the Guadalupe Mountains form a natural extension of habitat. However, A. S. Tomb commented that the McKittrick Canyon does not really fit any vegetational zone but rather constitutes a relictual island or refugium noted for the occurrence of many rare, disjunct or endemic, taxa.

The plants at hand resemble more the western var. *geyeri* A. Gray than the typical variety of *A. laevis*, for instance in the narrower, more pointed phyllaries, but they also exhibit some unique characteristics. The basal rosettes are strongly developed with several large, lanceolate, sessile or petiolate, glabrous and glaucous leaves still persistent when the plants are in flower (July through September). In the other varieties of *A. laevis*, as well as in *A. hesperius* (incl. var. *wootonii* Greene), the basal leaves are mostly withered at flowering time. The cauline leaves in this variant are linear-lanceolate, abruptly reduced in size, the larger ones dilated at the

SIDA 9(2): 172–175. 1981.

clasping, sometimes auricled, base. Several of the collections show the bracteate-leaved peduncles which characterize typical *A. laevis*. Heads are relatively large, with bright blue ligules and yellow or somewhat purplish tinged disk florets. Characters of the involucre and receptacle are also typical for the species, especially the presence of minute bristles on the alveolae of the receptacle.

In recognizing the morphological distinctness and the somewhat disjunct range, I am assigning varietal status to the populations of *A. laevis* from the Trans-Pecos region of Texas, as follows.

ASTER LAEVIS L. var. **guadalupensis** A. G. Jones, var. nov.

Characteribus proximus A. laevi *var.* geyeri *A. Gray sed differt; foliis basilaribus per tempora florescentiae persistentibus, sessilibus vel subpetiolatis, lamina lanceolata, caulinibus lineari-lanceolatis abrupte deminutis.*

TYPE: TEXAS. CULBERSON COUNTY: along stream, mouth of McKittrick Canyon, Guadalupe Mountains, 2 Jul 1958, *D. S. Correll & I. M. Johnston 19156* (HOLOTYPE: LL!—Figure 1).

Following is a key distinguishing this new variety from the other two varieties of *A. laevis* mentioned, and from *A hesperius*.

1a. Plants scattered, the rhizomes stout and relatively short; stems and leaves glaucous; basal leaves typically with winged petioles; cauline leaves thick and firm, sessile and conspicuously clasping, more or less abruptly reduced in size, those of the inflorescence branches bracteiform; phyllaries indurate at the broad base, the tips with well-defined rhombic to rhombic-oblanceolate herbaceous zones; alveolae of the receptacle bristly; ligules bright blue; achenes glabrous or nearly so.
  2a. Basal rosette leaves withered at flowering time; plants typically stout.
    3a. Phyllaries strongly imbricated in (3-)4–5 series, the tips acute with broad and short rhombic green zones; plants completely glabrous ..... *A. laevis* L. var. *laevis*
    3b. Phyllaries less strongly imbricated in 3–4 series, broadest at the base, the tips short-attenuate with narrower, rhombic-oblanceolate green zones; upper branches and achenes often slightly pubescent ..... *A. laevis* L. var. *geyeri* A. Gray
  2b. Basal rosette leaves persistent at flowering time; phyllaries as in var. *geyeri*; stems and achenes glabrous; plants comparatively slender ..... *A. laevis* L. var. *guadalupensis* A. G. Jones
1b. Plants colonial with a strongly creeping rhizome system; stems and leaves not glaucous; upper stem portions distinctly pubescent in lines; basal leaves not petiolate, the cauline leaves thin, flexuous, not conspicuously clasping, gradually reduced in size, the inflorescence leafy; phyllaries not indurate, the outer often entirely herbaceous, or the tips with oblanceolate green zones; alveolae not bristly; ligules lavender; achenes distinctly strigillose ..... *A. hesperius* A. Gray

ACKNOWLEDGMENTS

This research has been supported financially by N.S.F. Grant DEB-80-21772. Help received with the Latin diagnosis from Dr. D. P. Rogers is gratefully acknowledged, as is the loan of specimens from SRSC and TEX-LL.

Figure 1. Holotype of *Aster laevis* var. *guadalupensis* (*D. S. Correll & I. M. Johnston 19156*—LL!)

REFERENCE

WOOTON, E. O. and P. C. STANDLEY. 1915. Flora of New Mexico. Contr. U. S. Nat. Herb. 19: 1–794.